Seminar in Computer and Information Science

Title: Real Estate Ranking: from Black Magic to Data Science

Date: Tuesday, Feb 23, 2016
Time: 1:30 pm
Place: JMH 312 and will be video conferenced to LC
Speaker: Yanjie Fu, Rutgers University, NJ

Abstract: With the advent of mobile, Internet, and sensing technologies, large-scale urban and mobile data are available and are linked with locations near real properties. These data can be a source of rich intelligence for finding residential locations with high investment ratings and extracting insights of urban planning in big cities. In this talk, we aim to address the unique challenges of ranking real estate with urban geography and human mobility. To combine ranking with the geographic dimension, we propose a geographic method, named ClusRanking. ClusRanking is able to model the geographic individual, peer, and zone dependencies of real estate. To combine ranking with the mobility dimension, we develop a mixed land-use method, named FuncDivRank. FuncDivRank can learn latent community functions and the corresponding portfolios from heterogeneous human mobility data, and incorporate the functional diversity of communities for ranking. Finally, we present experimental results to demonstrate the effectiveness of our methods.

Bio: Yanjie Fu received his B.E. degree in Computer Science from the University of Science and Technology of China. In 2008, he was recommended to the Chinese Academy of Sciences with an exemption from examination as a graduate student and received his M.E. degree in Computer Engineering from the Chinese Academy of Sciences in 2011. He currently is a Ph.D. candidate in the Management Science and Information Systems Department, Rutgers, the State University of New Jersey, where he received the Rutgers Innovation Fellowship (2013), the IEEE ICDM Best Paper Runner-Up Award (2014), and the Dean’s Award for Summer Research at Rutgers Business School (2015). He has internship and co-op experience in industry research labs, such as Microsoft Research Asia, Huawei 2012 Labs, and IBM Thomas J. Watson Research Center.

His research interests are data mining and business analytics, with emphasis on urban computing, mobile analytics, personalized techniques, and their novel applications in business. He has been focusing on using big and heterogeneous data generated by diverse sources (e.g., sensors, devices, vehicles, buildings, human) in urban spaces to address various analytic challenges in geo-mobile environments. He has published in refereed journals and conference proceedings, such as IEEE Transactions on Knowledge and Data Engineering (TKDE), IEEE Transactions on Mobile Computing (TMC), Knowledge and Information Systems (KAIS), ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), IEEE International Conference on Data Mining (ICDM), SIAM International Conference on Data Mining (SDM).